

Application No. 10/705,533

Reply to Office Action

REMARKS**RECEIVED
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JUL 24 2006***The Pending Claims*

Claims 1-8 and 13-27 are currently pending. Claims 15-25 have been withdrawn.

Amendments to the Claims

Claims 1, 4, 13, 14, 26, and 27 have been amended to more particularly point out that which Applicant considers his invention. Specifically, claim 1 has been amended to (a) recite that the polishing pad is in the form of a solid polymer sheet, micropellets of the biodegradable polymer dispersed in a non-biodegradable polymer resin, or sintered micropellets of the biodegradable polymer, and (b) delete the reference to monosaccharides. Claim 4 has been amended to delete the reference to polysaccharides. Claim 13 has been amended to recite that the non-biodegradable polymer resin is selected from a group of resins. Claim 14 has been amended to recite that the polishing pad is in the form of micropellets of the biodegradable polymer dispersed in a non-biodegradable polymer resin. Claim 26 has been amended to recite that the polishing pad is in the form of a solid polymer sheet. Claim 27 has been amended to recite that the polishing pad is the form of sintered micropellets of the biodegradable polymer. Support for the amendments of claims 1, 4, 13, 14, 26, and 27 can be found in the instant specification at paragraphs [0017]-[0019]. No new matter has been added by way of these amendments.

Summary of the Office Action

Claims 1-8, 13, 14, 26, and 27 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly failing to comply with the written description requirement.

Claims 1-5 and 13 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly obvious over U.S. Patent 5,470,944 (Bonsignore) (hereinafter "Bonsignore").

Claims 1, 3, 4, 6-8, 13, 14, 26, and 27 stand rejected under 35 U.S.C. § 103(a) as allegedly obvious over U.S. Patent Application Publication 2003/0003857 (Shimagaki et al.) (hereinafter "Shimagaki").

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The Office Action provisionally rejects claims 1-8, 13, 14, and 26 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of copending U.S. Patent Application No. 10/705,121.

Discussion of the Section 112, First Paragraph, Rejections

The Section 112, first paragraph, rejections are moot in view of the amendments to the claims. Specifically, claims 1, 14, and 26-27 have been amended to recite that the polishing pad is in the form of a solid polymer sheet, micropellets of the biodegradable polymer dispersed in a non-biodegradable polymer resin, and/or sintered micropellets of the biodegradable polymer, as described in the instant specification at paragraphs [0017]-[0019]. Accordingly, the Section 112 rejections should be withdrawn.

Discussion of the Section 102/103 Rejections

The anticipation and/or obviousness rejections under *Bonsignore* are moot in view of the amendments to the claims.

The pending claims recite a *polishing pad* for use in chemical-mechanical polishing comprising a biodegradable polymer, wherein the biodegradable polymer comprises a repeat unit selected from the group consisting of glycolic acid, lactic acid, hydroxy alkanolic acids, hydroxybutyric acid, hydroxyvaleric acid, caprolactone, *p*-dioxanone, trimethylene carbonate, butylene succinate, butylene adipate, dicarboxylic acid anhydrides, enantiomers thereof, and combinations thereof, and wherein the *polishing pad* has a polishing surface and is in the form of a solid polymer sheet, micropellets of the biodegradable polymer dispersed in a non-biodegradable polymer resin, or sintered micropellets of the biodegradable polymer.

In order to anticipate the pending claims, *Bonsignore* must teach each and every element of the claims. As conceded on page 4 of the Office Action dated August 29, 2005, which is incorporated by reference in the most recent Office Action, *Bonsignore* fails to disclose a *polishing pad* as recited in the pending claims. Accordingly, *Bonsignore* does not anticipate the pending claims.

However, the Office Action dated August 29, 2005, asserts on page 4 that “[t]he preamble limitation ‘polishing pad’ is of no consequence when a composition is the same.” Applicant respectfully disagrees.

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The preamble functions as a claim limitation if it is necessary to “give meaning to the claim and properly define the invention.” *In re Paulsen*, 30 F.3d 1475, 1479 31 U.S.P.Q.2d 1671, 1673 (Fed. Cir. 1994). In this case, the term “polishing pad” limits the *structure* of the invention and is a claim limitation. See, for example, M.P.E.P. 2111.02. The Federal Circuit has stated that the effect of the preamble is determined in view of the “entirety of the patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim.” *Corning Glass Works v. Sumitomo Electric U.S.A. Inc.*, 868 F.2d 1251, 1257, 9 U.S.P.Q.2d 1962, 1966 (Fed. Cir. 1989). The present application is solely directed to improvements in polishing pads, not general improvements in the field of biodegradable polymers. To assert that the pending claims are not limited by the term “polishing pads” in view of the specification but rather indiscriminately encompasses biodegradable polymers is “divorced from reality.” *Id.*

Moreover, as amended, the pending claims recite the term “polishing pad” in the body of the claim. In addition, the Federal Circuit has stated that “[w]hen limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.” *Eaton Corp. v. Rockwell International Corp.*, 323 F.3d 1332, 1339, 66 U.S.P.Q.2d 1271, 1276 (Fed. Cir. 2003).

Since Bonsignore fails to disclose each and every element of the pending claims, the anticipation rejection is improper and should be withdrawn.

The obviousness rejection in view of Bonsignore likewise is improper. Since Bonsignore fails to teach or suggest all of the claim limitations, i.e., a polishing pad, a *prima facie* case of obviousness has not been established.

Finally, the obviousness rejections under Shimagaki are moot in view of the amendments to the claims. Claim 1 as amended recites a polishing pad for use in chemical-mechanical polishing comprising a biodegradable polymer, wherein the biodegradable polymer comprises a repeat unit selected from the group consisting of glycolic acid, lactic acid, hydroxy alkanolic acids, hydroxybutyric acid, hydroxyvaleric acid, caprolactone, *p*-dioxanone, trimethylene carbonate, butylene succinate, butylene adipate, dicarboxylic acid anhydrides, enantiomers thereof, and combinations thereof. Claim 4 as amended recites the polishing pad of claim 1, wherein the biodegradable polymer is selected from the group consisting of polyglycolide, polycaprolactone, poly(dioxanone), poly(trimethylene

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carbonate), polyglyconate, polyhydroxybutyrate, polyhydroxyvalerate, poly(1,4-butylene succinate), poly(1,4-butylene adipate), polyanhydrides, polyorthoesters, and combinations thereof. Shimagaki does not disclose a biodegradable polymer comprising a repeat unit selected from the group recited in claim 1 as amended or a biodegradable polymer selected from the group recited in claim 4 as amended. Moreover, there is nothing in Shimagaki that suggests the use of any of the repeat units recited in claim 1 or the biodegradable polymers recited in claim 4.

Since Shimagaki fails to teach or suggest each and every element of the pending claims, the obviousness rejection is improper and should be withdrawn.

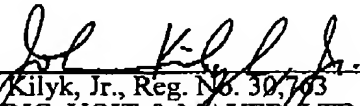
Discussion of Non-Statutory Double Patenting Rejection

Applicant acknowledges that claims 1-8, 13, 14, and 26 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly claiming an invention that is unpatentable over claims 1-16 of copending U.S. Patent Application No. 10/705,121. Applicant will address this rejection if and when the referenced application issues as a patent and the rejection is no longer provisional in nature.

Conclusion

Applicants respectfully submit that the patent application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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